



COMMUNITY DEVELOPMENT DEPARTMENT
Building Inspection Division
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RESIDENTIAL PLAN REVIEW CHECKLIST

These sheets, when attached to a set of plans, become part of those plans and must remain attached thereto. The approval of this plan and the specifications shall not be held to permit or approve the violation of any City Ordinance, State or Federal law.

Project Description:	Permit No.:
Project Address:	Date:
<i>I have read and will comply with the items in this document and as marked on the approved plans.</i>	
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Name & Signature: <input type="checkbox"/> Owner <input type="checkbox"/> Authorized Agent <input type="checkbox"/> Contractor <input type="checkbox"/> Architect/Engineer	

Building Code Requirements (Based on 2007 CBC) (Effective January 1, 2008)

- B-1 Smoke detector** location required in each bedroom and adjoining hallway, and at least one required in each story and basement. Where ceiling height of a room opens to the hallway serving the bedrooms exceeds that of the hallway by 24-in or more, install in hallway and in the adjacent room.
- B-2 In new construction**, detectors shall receive primary power from a commercial source and have a battery back up. [907.2.10.2]
- B-3 When alterations, repairs, or additions** have a value in excess of \$1,000, or when one or more sleeping rooms are added or created, smoke detectors shall be provided to protect existing sleeping rooms. The detector may be battery-operated. [907.2.10.5.2]
- B-4 Emergency escape and rescue**, from basements in dwelling units and every sleeping room below the fourth story, shall have at least one operable window or door approved for emergency escape or rescue that shall opens directly into a public street, public way, yard, or exit court. It shall also have the following *openable net clear* dimensions: [1026.1]
- Minimum area of 5.7 ft ² (**Exception:** grade floor openings 5 square feet)
 - 24-in minimum height
 - 20-in minimum width, and
 - A finished sill height of not more than 44-in above the floor
- B-5 All garages (U-1 occupancy) attached to dwellings (R-3 occupancy) shall be separated** by ½ inch gypsum board applied to the garage side. Garages beneath habitable rooms shall be separated by not less than 5/8 inch Type X gypsum board or equivalent. Door openings between the garage and the dwelling unit shall be, solid-wood door 1-3/8 -in thick, or 20-minute door. [406.1.4 #1]

- B-6 Fire dampers need not** be installed in air ducts passing through the wall, floor, or ceiling separating the dwelling (R-3 occupancy) from the garage (U-1 occupancy) provided such ducts within the garage are constructed of 0.0019 inch sheet steel and have no openings into the garage. [406.1.4 # 2]
- Sub-panels must not penetrate membrane
 - 16 in² maximum opening for metal electrical boxes
 - No back-to-back metal electrical boxes; (24-in horizontal separation)
 - 100 in² per 100 ft² of openings maximum (six 6-in square metal electrical boxes) [712.3.2]& [712.4.1.1]
- B-7 Natural light** required for guest rooms and habitable rooms of 8% minimum of the floor area by means of exterior glazed openings. [1205.2]
Exception: Kitchens may be provided with artificial light.
- B-8 Natural ventilation** required for guest rooms and habitable rooms of 4% minimum of the floor area by means of openable exterior openings. [1203.4.1]
- B-9** Bathrooms, water closet compartments, laundry rooms and similar rooms shall be provided with **natural ventilation or mechanical ventilation** of 5% minimum of the floor area. [1203.3] Mechanical Ventilation CMC Table 4-4.
- B-10 Safety glazing** required for all glazing located in “hazardous locations” such as: [2406.3]
- Ingress and egress doors (except jalousies); fixed and sliding panels of sliding door assemblies, in swinging doors (other than wardrobe doors); storm doors.
 - Doors and enclosures for hot tubs, whirlpools, saunas, steam rooms, bathtubs and showers; glazing of a building wall enclosing these compartments where bottom exposed edge of the glazing is less than 60-in above a standing surface and drain inlet.
 - Fixed or operable panels adjacent to a door where the nearest exposed edge of the glazing is within a 24-in arc of either vertical edge of the door in a closed position, and where the bottom exposed edge of the glazing is less than 60-in above the walking surface.
 - In an individual fixed or operable panel that meets all of the following: a) exposed area of individual pane is greater than 9 ft²; b) exposed bottom edge is less than 18-in above floor; c) exposed top edge is greater than 36-in above floor; and d) one or more walking surfaces are within 36-in horizontally of the plane of the glazing.
 - Railings regardless of height above a walking surface, including structural baluster panels and non-structural in-fill panels.
 - In walls and fences used as the barrier for indoor and outdoor swimming pools and spas when it meets all of the following: a) bottom edge of glazing is less than 60” above pool side of glazing, and b) glazing is within 5-ft of a swimming pool or spa water’s edge.
 - In walls enclosing stairway landings or within 60 inches of the bottom and top of stairways where the bottom edge of the glass is less than 60 inches above a walking surface.
- B-11 Attic access** 20-in x 30-in with 30-in minimum vertical headroom. [1209.2] Appliance in Attic 22 in X 30 in CMC 904.11.1
Note: Attics with a maximum vertical height of less than 30-in need not be provided with access openings.
- B-12 Private stairways with occupancy load less than ten** may be constructed as follows: [1003.3.3.3]
- Riser maximum of 7.75-in, 10-in minimum tread and 36-in minimum width.
 - The largest tread run and greatest riser height within any flight of stairs shall not exceed the smallest by more than 0.375-inch.
 - Two or more risers constitute a stairway.
 - Maintain 6-ft 8-in minimum headroom clearance; 12-ft maximum vertical distance between landings.
- B-13 Enclosed usable space under stairway** shall have the walls and soffits protected on the enclosed side by ½ gypsum board. [1009.5.3] Exception
- B-14 Guardrails in dwellings (R-3 and U-1 Occupancies)** are required for any walk off greater than 30-in from ground and shall meet the following: CBC [1013.3]
- 42-in minimum height

- Open guardrails with intermediate rail or an ornamental pattern such that a 4-in sphere in diameter cannot pass through; minimum 6-in opening at tread. Guard rail on side of stair tried 4.375 CBC[1013.3 Exception]
 - Construction to resist a 50 plf horizontal load perpendicular to top rail [1607A.7.1]
 - Support structure shall resist a 200-lb load in any direction CBC [1607A.7.1.1]
- B-15 Handrails** are required with four or more risers with ends to return to wall or newel posts and shall meet all of the requirements: [1009.10]
- Railing height between 34-in minimum and 38-in maximum
 - Grips must be 1¼-in to 2-in; maximum projection of 1½-in between wall and rail
 - Support structure shall resist a 200-lb load in any direction CBC [1607A.7.1.1]
 - Construction to resist a 50 plf horizontal load perpendicular to top rail [1607A.7.1]
- B-16 Showers** shall be finished with a smooth, hard, nonabsorbent surface to a height of 70-in above the drain inlet. . [1210.3]
- B-17 Heat required in habitable rooms** capable of maintaining a room temperature of 68° F at a point 3-ft above the floor. [1204.1]
- B-18 Ceiling height** in habitable rooms shall be 7-ft 6-in minimum; 7-ft minimum required for non-habitable rooms such as kitchens, bathrooms, or hallways. [1208.2]
- B-19 Factory built chimneys and fireplaces** shall be listed and installed in accordance with the terms of their listing and manufacturer's instructions. [2111.13.1]
- B-20 Masonry and concrete chimneys**, unless a specified design is provided, shall be reinforced and anchored according to Section 2111.1. They must also meet the requirements per Sections 2111.3.1, 2111.3.2, 2111.4 and 2111.4.1 as follows:
- Hearth slab must be distinguishable from surrounding floor with a minimum 4-in thickness.
 - For an opening less than 6 ft² provide a hearth depth of 16-in and 8-in from each side; for an opening at 6 ft² or greater, provide a hearth depth of 20-in and 12-in from each side.
 - Minimum of 2-in clearance between chimney and combustibles.
 - Minimum ; throat 4-in deep, 8-in above opening.
- B-21 Fire stopping** required for combustible construction in the following concealed locations: [717.2]
- In stud walls and partitions spaces at 10-ft intervals both horizontal and vertical.
 - At all interconnections between vertical and horizontal spaces (soffits, drop and cove ceilings).
 - Between stair stringers at top and bottom of run, between studs along and in line with run of stairs if walls of stairs are unfinished.
 - Around vent openings, pipes, ducts, chimneys, fireplaces and similar openings that afford passage for fire.
- B-22 A landing** with a 36-in minimum length measured in the direction of travel is required for all exterior doors, not exceeding a 2% slope. [1008.1.5]
- B-23 Attic / under-floor net free ventilation** required of not less than 1 ft² for each 150 ft² of space to be ventilated, provided: [1203.2]
- Openings for ventilation to be covered with corrosion-resistant metal mesh with ¼-in openings
 - Allow for 1-in minimum air space between insulation and roof sheathing at eaves or cornice vents
- B-24 Access Opening**:: 18-inches x 24 inches. [1209.1]
- B-25 Exterior stucco application** shall consist of a 3-coat system, 7/8-in minimum thick; two layers of Grade "D" building paper over sheathing; 26 Gauge galvanized weep screed at foundation plate line at least 4-in above grade (or 2-in above concrete or paving). [2512.1]

Mechanical Code Requirements (Based on 2007 CMC)
(Effective January 1, 2008)

- M-1 Domestic clothes dryer moisture exhaust ducts** to be installed as follows: [504.3]
- Terminate on the outside of the building and be equipped with a back-draft damper.
 - Not be connected or installed with sheet metal screws or other fasteners, which will obstruct the flow.
 - 14-ft maximum run with two 90° bends, deduct 2-ft per 90° bend in excess of two bends as required by the manufacturer's installation instructions and approved by the building official.
- M-2 Make up air** shall be provided when a closet is designed for a clothes dryer with a minimum opening of 100 in² in the door or by other approved means.
- M-3 Listed cooking appliance or microwave oven above a listed cooking appliance** shall conform to the conditions of the upper appliance's listing and the manufacturer's installation instructions.
- M-4 Domestic range vents**, or ducts used for domestic kitchen range ventilation, shall be of metal and have smooth interior surfaces. [504.2]
Exception: Downdraft grill-range ventilation installed under a concrete slab floor may be of approved Schedule 40 PVC provided:
- *The under-floor trench where duct is installed is completely backfilled with sand or gravel.*
 - *Not more than 1-in of 6-in diameter PVC coupling may protrude above the concrete floor surface.*
 - *PVC pipe joints shall be solvent cemented to provide an air- and grease-tight duct.*
 - *Duct shall terminate above grade outside the building and be equipped with a backdraft damper.*
- M-5 Fuel burning equipment** shall be assured a sufficient supply of combustion air as per Chapter 7.
- M-6 Appliances installed in garages**, and which generate a glow, spark or flame capable of igniting flammable vapors, shall be installed with the pilots and burners or heating elements and switches at least 18-in above the floor level. [308]
- M-7 Furnaces located in attic** shall be accessible by an opening and passageway as large as the largest piece of furnace and in no case less than 22-in x 30-in continuous from the opening to the furnace and its controls.
Exception: Access opening may be 22-in x 30-in provided the largest piece of equipment can be removed through the opening.
- In addition, they must be provided with the following: [904.11]
- A continuous solid flooring not less than 24-in wide from access opening to the furnace, with a maximum distance from opening not to exceed 20-ft.
 - A level working platform not less than 30-in in depth and width provided in front of the entire firebox side of the warm-air furnace. If the furnace temperature-limit control, air filter, fuel-control valve, vent collar or air-handling unit is not serviceable from the firebox side of the furnace, a continuous floor not less than 24-in wide in front of the firebox side to and in front of this equipment.
 - A permanent electric outlet and lighting fixture controlled by a switch located at the required passageway opening shall be provided at or near the furnace.
- M-8 Vent termination** type B or BW gas vents with listed vent caps 12-in in size or smaller shall be permitted to be terminated in accordance with Figure 8-1, provided they are located at least 8-ft from the vertical wall or similar obstruction. All other Type B gas vents shall terminate not less than 2-ft above the highest point where they pass through the roof and at least 2-ft higher than any portion of a building within 10-ft. [802.6.2]
Note: Single wall metal vent connectors shall not originate in an unoccupied attic or concealed space and shall not pass through an attic, inside wall or concealed space.
- M-9 Approval of equipment**, whether listed or unlisted equipment, shall comply with provisions of Section 302.

Electrical Code Requirements (Based on 2007 CEC)
(Effective January 1, 2008)

- E-1** **A grounding electrode** shall be provided per Article 250-50.
- E-2** **Receptacle outlets shall be located** at the following wall locations: [210-52(a), 210-52(b), 210-52(e)]
- Any wall 2-ft wide or greater.
 - 12-ft maximum and within 6-ft of the end of walls (wall spaces include fixed panels in exterior walls, excluding sliding panels, and also fixed room dividers such as bar type counters or railings).
 - In any hallway 10-ft or more in length.
 - With direct grade level access (6-in of ground), at least one receptacle front and rear must be G.F.C.I. protected and provide with weatherproof enclosures.
- E-3** **At least one switch-controlled lighting** outlet required in **every** location: [210-70(a), 210-52(g)]
- Habitable rooms
 - Bathrooms
 - Hallways and stairways (3 way / ≥ 6 steps)
 - Attached / detached garages with electric power, storage or utility areas, attics, basements, in addition to any provided for laundry equipment
 - Outdoor entrances or exits
- E-4** Provide **G.F.C.I. protection** to all 125 volt, 15 and 20 amp receptacles installed in: [210-8(a)(1)]:
- Bathrooms
 - Garages
 - All receptacles serving counter top surfaces installed in kitchens
 - Receptacles serving counter top surfaces installed within 6-ft of a wet bar sink
- E-5** In the **kitchen, pantry, breakfast room, dining room, or similar area**, provide two or more 20-amp small-appliance circuits; these cannot serve outside outlets – only the required countertop / wall outlets including refrigerator. [210-11(c)(1) & 210-52(b)]
- E-6** Provide a separate 20 amp circuit to supply the **laundry** receptacle outlets [210-11(c)(2) & 210-52(f)]
- E-7** A separate 20-amp circuit is required to serve **bathroom** outlets; the circuit cannot supply any other receptacles, lights, and fans. [210-11(c)(3) & 210-52(f)]
Exception: where circuit supplies a single bathroom, outlets for other equipment within same room can be on this circuit.
- E-8** Receptacles within bathtub or shower space are **prohibited**, even if enclosed. [410-57(c)]
- E-9** Cord-connected lighting fixtures, lighting tracks or ceiling-suspended (paddle) fans within 3-ft of horizontal edge and 8-ft vertical **above top of tub/shower dam are prohibited**. [410-4(d)]
- E-10** All receptacles in **bedrooms** to be protected by an 'arc-fault circuit interrupter. [210-12(a) thru (b)]
- E-11** Fixtures installed in **recessed cavities** in walls or ceilings shall comply with Sections 410-65 thru 410-72.
- E-12** Clearances for fixtures in **clothes closets** shall be as follows: [410-8(d)(1) through (4)]
- Surface-mounted incandescent (IC) lights need a 12-in clearance
 - Surface-mounted & recessed fluorescent lights need a 6-in clearance
 - Recessed (IC) lights, with a completely enclosed lamp, need a 6-in clearance
- E-13** Provide fuses or approved circuit breakers at **A.C. units and heat pumps**. [440-14, 440-52(b)]
- E-14** **Hydromassage bathtub circuits** and their associated electrical components G.F.C.I. protected and its equipment must be accessible. [680-71 & 680-72]
- E-15** **Light fixtures** that weight more than 6 lbs or exceed 16-in in any dimension shall not be supported by the screw shell of a lamp holder. [610-15(a)]

Plumbing Code Requirements (Based on 2007 CPC)
(Effective January 1, 2008)

- P-1** No **under-floor cleanout** shall be located more than 20-ft from an access door, trap door or crawl hole. Maintain the following **clearances** - < 2-in drain requires 12-in; > 2-in drain, 18-in. [707.9 & 707.10]
- P-2** **Joints** where a fixture meets wall or floor must be sealed and made watertight. [407.2]
- P-3** **Water heaters locations permitted** as follows:
- **In garage:** if generating a glow, spark, or flame capable of igniting flammable vapors, shall provide the pilots, burners or heating elements, and switches at least 18-in above floor. When such equipment is mounted on stands, such stands shall be enclosed. If W/H is **subject to mechanical damage**, protect with adequate barriers (i.e., bollard) or relocate out of normal path of vehicle. [508.14]
 - **In attic locations:** have watertight pan and ¾-in drain; provide stairs or permanent ladder. [508.4]
 -
- P-4** **Water heater strapping or anchoring** required at upper and lower 1/3, minimum 4-in to controls. [510.5]
Note: Perforated iron strap (plumber's tape) will not be an acceptable method for strapping/bracing for water heaters over 40 gallons.
- P-5** Any water system containing **storage water heating equipment** shall be provided with an approved, listed, and adequately sized combination pressure and temperature relief valve. [608.6]
- P-6** Fuel burning water heaters shall be installed per Section 507.0, and Table 5-1 for **combustion air**.
- P-7** **Insulate** all hot recirculation pipes; min. R-12 integral (no blanket). [Energy Standards]
- P-8** **Minimum capacity** shall be equivalent to not less than first hour rating per Table 5-1. [501]
- P-9** **Access and working space** shall be required for inspection, repair, or replacement of a water heater with the following clearances: [509.4]
- The appliance space shall be provided with an opening or doorway of sufficient size to remove the water heater.
 - In no case shall such opening or doorway be less than 22-in in width by 30-in high. [509.4]
 - A solid floor passageway 24-in wide minimum, maximum 20-ft long. [509.4.2]
- P-10** **Relief valves located inside a building** shall be provided with a drain of galvanized steel, hard drawn copper piping and fittings, CPVC, or listed valve drain. The drain shall extend from the valve to the outside of the building with the end of the pipe not more than 2-ft or less than 6-in above the ground and pointing downward or above flood level [608.5]
Note: No part of such drain pipe shall be trapped, and the terminal end of the drain pipe shall not be threaded and shall not terminate in a craw space.
- P-11** **Showers & tub-shower combinations** shall be provided with individual control valves of the pressure balance or thermostatic mixing valve type. [418]
- P-12** **Shower compartments**, regardless of shape, shall have a shower pan total area of 1,024 in² and be capable of encompassing a 30-in circle up to 70-in. [411.7]
- P-13** Potable water outlets with hose attachments, other than water heater drains, boiler drains, and clothes washer connectors, shall be protected a listed non-removable hose bibb type **backflow preventer**, or a listed atmospheric vacuum breaker. [603.4.7]
- P-14** **Dishwasher air gap** fitting required above sink flood rim. [807.4]
- P-15** **Water closets** located in a clear space not less than 30-in in width; the clear space in front of it shall be no less than 24-in. [407.6]